| Eskom Rotek Industries | Scope of Work | ERI/BMS/CCP |
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Title: **Scope of Work for the Purchase of Ash Clinker at Eskom Distribution Ash Dump in Witbank**

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## 1. PURPOSE

The purpose of this Request for Proposal (RFP) is to invite proposals from interested parties to purchase clinker ash from Eskom Distribution Ash Dump in Witbank as a commercial operation.

## 2. BACKGROUND

The ash facility was historically used for the disposal of ash generated from the Eskom, Witbank Power Station which was commissioned in 1927. With the construction of the Wilge Komati, Camden, Hendrina, Arnot, Kriel and Grootvlei power stations, demand on the Witbank power station decreased. The last time the Witbank power station was mentioned in an annual report was in 1963, and in 1970 all operations ceased. The building was still used as the headquarters for the Eastern Transvaal Operation. The Witbank power station was demolished in the mid-1990's. The ash facility was used as a discard dump for incinerated coal generated by the power station operations. Stockpiling activities at the ash facility were ceased in 1970.

## 3. SITE DESCRIPTION AND LOCATION

The Eskom Plant is located in the town of Witbank, Mpumalanga Province in South Africa some 120km east-northeast of Johannesburg along the N12, and 102km east-southeast of Pretoria along the N4. The 24.5ha ash facility is situated on the southwestern outskirts of the Witbank Central Business District, adjacent to the N4/R555 Interchange, the Golf Course and Pretoria University to the north, and Del Judor Suburb to the east (Figure 1). Land immediately west of the site is either under plantation, cultivated land or excavations, presumably mining-oriented; southwest of this is the Rifle Range.

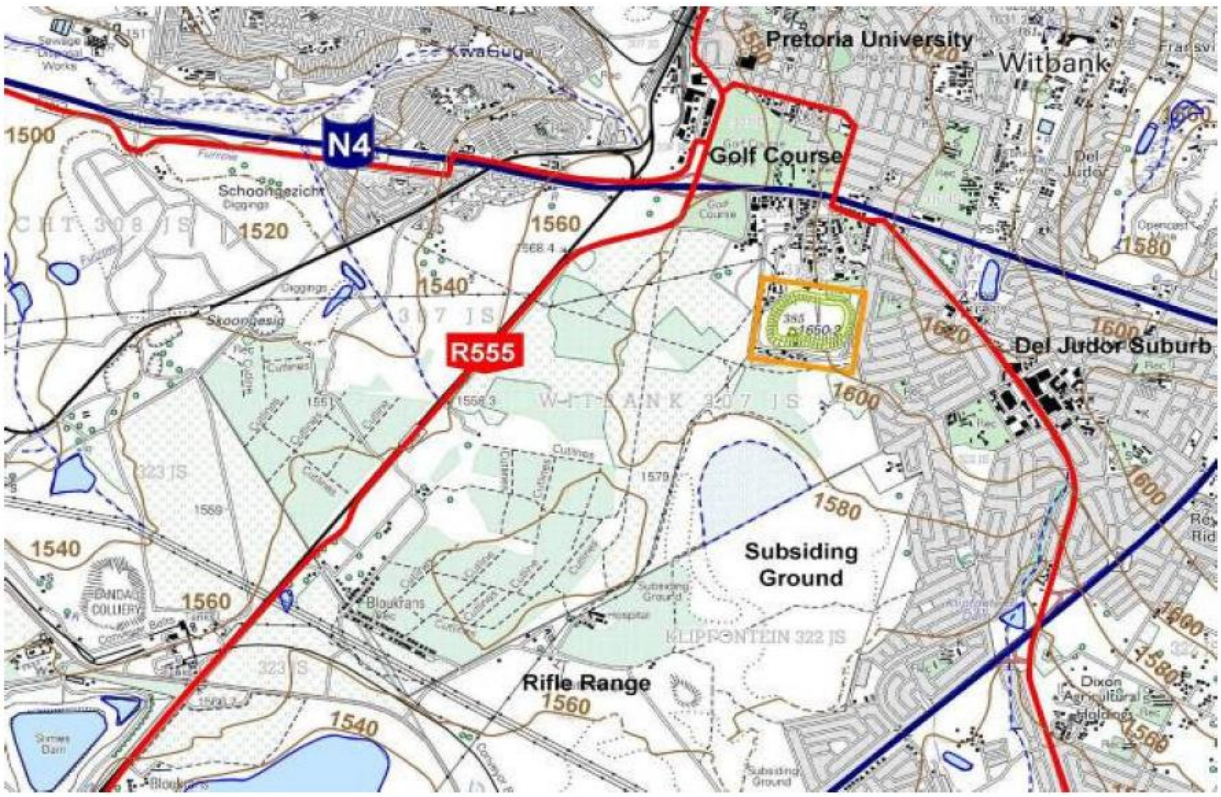


Figure 1 Locality map for the Eskom Ash Facility on the southwestern outskirts of the Witbank CBD.

## 4. ASH BENEFICIATION PROGRAMME

Research has shown that coal ash can be used in fertilizers, plaster industries, cement, etc., to replace virgin materials removed from the earth, thus conserving natural resources and also in mine backfilling, road construction, concrete mix, etc. Department of Fisheries, Forestry and Environment encourages the beneficial use of coal ash in an appropriate and protective manner and has thus excluded from being regulated as a hazardous material if it used in the following applications: cement, brick and block making, geopolymers, filler applications, zeolites, mineral extraction, fibre production, road construction, mine backfilling, treatment of acid mine, drainage, soil amelioration and conditioning, wallboards and plaster of paris.

The primary reason for Eskom to pursue the beneficiation of ash is to reduce and eventually eliminate the costs associated with the management of ash disposal facilities while eliminating the environmental risk associated with the disposal facilities.

Considerable international and local research has been done on ash and the possible applications thereof. Eskom is driving high volumes at low prices rather than constraining volumes through high prices. It is therefore important that new markets that consume high volumes of ash such as mine-backfill, road construction and agriculture are encouraged whilst simultaneously encouraging research into other uses for the ash.

Dumped Ash (the ash already deposited and stored at the ash disposal site) is mostly well suited for this high ash volume supply as they are readily available and can meet any market demand.

## 5. Scope of Work and Deliverables – Ash Clinker Dump at Witbank Ash Dump

### 5.1 Description of the service

Eskom wishes to enter into a contract with one company for a minimum period of 10 years at Witbank Ash Dump as part of this RFP. Eskom is extending an invite to interested parties to submit proposals on ash beneficiation of Dumped Ash into any high ash volume (40,000 tons and above) application. The proposal must seek to purchase and beneficiate ash from the ash dump in Witbank and in doing so, amongst others seek to address the socio-economic challenges of the country, that is, creation of jobs and business development for local communities.

The ash is being produced as a waste product through burning coal in the boilers as part of the steam generating process. Both fly ash and boiler bottom ash is mixed before it is transported to the ash disposal facility (ADF) by means of conveyer belts or pipes system in a form of a slurry and dried.

1. The successful bidder will raise the necessary capital for their project and the working capital to ensure sustainability of their project.

2. The successful bidder will establish the most suitable methodology of removing the ash from the already placed ash on the dump or dam.

3. The successful bidder provides all equipment necessary for the safe excavation, stockpiling, loading and transporting of ash from the ADF to the beneficiation site.

4. Eskom shall have access to the beneficiation site at reasonable times in fulfilment of its 'cradle-to-grave' waste management obligation.

5. The successful bidder(s) will be responsible for loading facility that may be required at the Witbank Ash Dump.

6. The collected clinker ash will be weighed and invoiced by Eskom at the end of the month at the agreed rate (R/ton collected).

7. All submitted figures must be supported by copies of weighbridge slips/dispatch or delivery notes signed by the receiver, as well as waste manifests.

In summary, the successful bidder needs to be able to perform the following functions in order to be able to satisfy their mandate of purchasing ash from Witbank Ash Dump in high volumes to promote job creation, localisation, supplier development, skills development and industrialization:

1. Brief description of the intended use of the ash.
2. Brief description of available areas for stockpiling of coal ash at premises.
3. Available licensing to beneficiate ash on the premises.
4. Brief statement on collection and loading methodology.
5. Brief statement on risks involved in reclaiming the ash and mitigation thereof
6. Proposed route for transportation of the ash.
7. Transportation licensing and local municipality agreements.
8. If the ash is for mine back-fill, is the mine in possession of a valid Department of Mineral Resource (DMR) license. Please submit proof.
9. Does the mine/construction project have approval from DWS for the beneficiation of ash?
10. If the beneficiation is for mine-backfill, does the mine have any water testing of rivers downstream of the opencast mine for a period of at least six (6) months?
11. Confirm the volume of ash the contractor is able to beneficiate in a 24-hour period.

## 6. SHEQ Requirements

### 6.1 Safety Requirements

The Contractor compiles a detailed Risk Assessment and submits to the Project Manager for the approval. The Risk Assessment should cover all the activities that shall be conducted by the Contractor during the Works execution stage, addressing in particular the risk of collapse, mudslides, slope failures, caving in, etc. The Contractor proves the risk identified with its aggravating factors and mitigating factors.

### 6.2 Quality Requirements

The Contractor complies with the ISO 9001:2015 Quality Management System and Eskom Supplier Quality Management Specification QM 58 240-105658000. Quality documents for inspections and tests plans shall be required to be submitted to the Project Manager for approval before the works begin on site and after execution.

### 6.3 Health Safety and Environment (SHE)

The Contractor complies with the Occupational health and safety act 85 of 1993 and regulations, as well as:

- Compensation for Occupational Diseases and Illnesses Act 130 of 1993
- Basic conditions of employment act 75 of 1997
- Eskom contractor health and safety requirements 32-136
- Project SHE specification provided
- Eskom life-saving rule procedure 240-62196227
- Eskom SHEQ policy 32- 727 rev 3
- Eskom Environmental, Occupational Health and Safety Incident Management Procedure 32-95
- Eskom Plant Safety Regulations
- All staff will undergo Safety Induction, presented by Employer's Risk Management Department.
- Contractor obtains a permit and adheres to the permit to work system used at Kendal Power Station before carrying out any work.

### 6.4 Legislative Requirements - According to the National Environmental Management Act.

The successful bidder would be required to be aware of the relevant requirements of the:

- National Environmental Management: Waste Act;
- National Environmental Management Water Act;
- National Environmental Management Air Quality Act;

And all other relevant pieces of legislation.

## 7. Documentation Required

a) The Contractor provides the Employer with a detailed method statement for the entire works, for review and acceptance prior to commencement. The method statement takes into account the requirements of the Occupational Health and Safety Act (No. 85 of 1993) and Construction Regulations, 2014.

b) Quality Control Plan for review and input of Employer intervention points.

### 7.1 SHE Documentation

The Contractor shall provide the following documents in terms of Health, Safety and Environmental performance:

- An organogram indicating the names of all persons that will hold legal appointments on the project in terms of the Act.
- The expected roles, responsibilities and authority of those who are proposed to receive legal appointments.
- Provide an overview of the system / program that is utilized to manage Safety, Health and Environment.
- Health and Safety plan/program
- Health and Safety policy
- SHE induction program
- Training records of each employee
- Health and Safety objectives
- Incident management
- Waste Management Plan
- Emergency Preparedness Plans (e.g. oil / chemical spill, disasters, etc.)
- Environmental Management System File

- A detailed signed Contractor's Environmental Management Plan (EMP) pertaining to site specific activities.

**Eskom power stations are ISO 14001: 2004 certified therefore the successful bidder complies with the requirements of the following procedures:**

a) Waste Management Procedure: 1024102
b) Environmental non-conformities, corrective and preventive actions: 1015684
c) Emergency preparedness plan 1015702
d) Environmental competency, training and awareness 1015689

The above-mentioned procedures will be given to the appointed contactor before the commencement of the project. The procedures must always be available in the file and controlled disclosure.

## 8. COMMUNITY PARTICIPATION

The proposal must clearly demonstrate the bidder's intention to address the injustices of the past through transformation, inclusive growth and the involvement of Emalahleni Local Municipality companies. Skills upgrading and direct employment from the neighbouring communities will contribute towards such transformation.